

Date: Wednesday, 28/01/2009 4:59:16 PM
 User: Julie Dawson

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : R44 CARGO MIRROR
Job Number : 45312	
Estimate Number : 10095	
P.O. Number :	Part Number : D044715011
This Issue : 28/01/2009 S.O. No. :	Drawing Number : D3243 REVA
Prsht Rev. : NC	Project Number : N/A
First Issue : / / Type : SMALL /MED FAB	Drawing Revision : A
Previous Run : 40463	Material : Manufacture in multiples of 10
Written By :	Due Date : 20/02/2009 Qty: 3 Um: Each
Checked & Approved By : JUD 09-01-29	
Comment :	
Est Rev:A 04.02.18 New issue KJ/JLM	
Est Rev:B 06-04-28 Manufactured on Water Jet JLM	
Est Rev:C 08-06-10 as per ECN1195p DD verified by:EC	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

1.0	DC	DOCUMENT CONTROL
-----	----	------------------



Comment: DOCUMENT CONTROL

Photocopy bluefile & type labels per PPPD044-715-011

CHG0023

S 09/02/11

2.0	M6061T6S063	6061-T6 .063 Sheet
-----	-------------	--------------------



Comment: Qty.: 0.5359 sf(s) Unit Total : 1.6078 sf(s)

Material: 6061-T6 (QC-A-250/11) 0.063" thick(M6061T6S.063)

Identify for D3243-1

Batch: _____

3.0	WATER JET	FLOW WATER JET
-----	-----------	----------------



Comment: FLOW WATER JET

1-Cut as per Dwg D3243

Dwg Rev: _____

Prog Rev: _____

2-Deburr if necessary

4.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
-----	-----	--



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

QC8

SECOND CHECK



Comment: SECOND CHECK

6.0

BRAKE NC

NC BRAKE



Comment: NC BRAKE

Bend as per Dwg D3243

7.0

QC6

DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

8.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

1-Chemical Conversion Coat as per QSI 005 4.1

9.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

10.0

FE032EF

Inserts



Comment: Qty.: 4.0000 Each(s)/Unit Total : 12.0000 Each(s)

Pick:

Qty Part Number

Description Batch

4 FE-032EF

Insert

M108546

1 D3243-1(Ref)

Bracket

11.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Assemble as per Dwg d3243

12.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Job Number:



Seq. #: Machine Or Operation: Description :

13.0 POWDER COATING POWDER COATING



Comment: POWDER COATING

1-Powder Coat Black Sandtex (Ref: 4.3.5.7) as per QSI 005 4.3

START TIME: _____

OVEN TEMPERATURE: _____

FINISH TIME: _____

N/A L

14.0 QC3 INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

15.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick Packing Kit

(9)

16.0 D1048 Saddle



Comment: Qty.: 2.0000 Each(s)/Unit Total: ~~6.0000~~ Each(s)

Pick: Packing Kit

Qty Part Number Description Batch
2 D1048 Clamp

B35037

SS 09/02/11 (X9)

17.0 D1049 Saddle



Comment: Qty.: 2.0000 Each(s)/Unit Total: ~~6.0000~~ Each(s)

Pick: Packing Kit

Qty Part Number Description Batch
2 D1049 Saddle

39919

SS 09/02/11 (X9)

18.0 D2010104 Mirror Arm 369/500



Comment: Qty.: 1.0000 Each(s)/Unit Total: ~~8.0000~~ Each(s)

Pick: Packing Kit

Qty Part Number Description Batch
1 D2010-104 Arm

40046

SS 09/02/11 (X9)

15.1 1 x D3243-041

(pull from stl)

B 25227 x3
25117 x6

SS 09/02/11 (X9)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Part Number: D044715011

Job Number:



Seq. #:

Machine Or Operation:

Description :

19.0

D2011101

6" Mirror



Comment: Qty.: 1.0000 Each(s)/Unit Total: ~~3.0000~~ Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

1 D2011-101 Mirror

43793

SS 09/02/11 (X9)

20.0

ALS41032130

Insert



Comment: Qty.: 4.0000 Each(s)/Unit Total: ~~12.0000~~ Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

4 ALS4-1032-130 Insert

M105819

SS 09/02/11 (X9)

21.0

AN34A

Bolt



Comment: Qty.: 4.0000 Each(s)/Unit Total: ~~12.0000~~ Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

4 AN3-4A Bolt

M103641

SS 09/02/11 (X9)

22.0

AN526C1032R10

Screw



Comment: Qty.: 4.0000 Each(s)/Unit Total: ~~12.0000~~ Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

4 AN526C1032R10 Screw

M110049

SS 09/02/11 (X9)

23.0

AN960JD10L

Washer



Comment: Qty.: 4.0000 Each(s)/Unit Total: ~~12.0000~~ Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

4 AN960JD10L Washer

M109632

SS 09/02/11 (X9)

24.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

SS 09/02/11 (X9)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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Job Number: 45312

Part Number: D044715011

Job Number:



Seq. #:

Machine Or Operation:

Description :

25.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D044-715-011

Location: _____

Rev C

SS 09/02/11 @

26.0

QC21

FINAL INSPECTION/W/O RELEASE



09/02/12

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



MF
09-02-12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

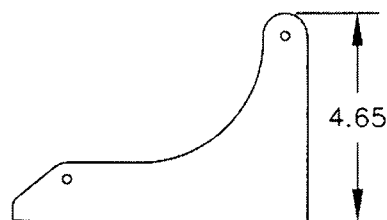
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries



DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO. D3243	REV. A SHEET 1 OF 1
DATE 04.01.09	TITLE BRACKET		SCALE 1:2
A	04.01.09	NEW ISSUE	



R0.188 (TYP)



D3243-1 BEND DETAIL/
D3243-041 ASSEMBLY
SCALE 1:4

INSTALL
FE-032-EF INSERTS
(4 PLACES)

2.75^{+0.030}
0.000

UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 45312

11.920

11.420

Ø0.201
(TYP 4
PLACES)

Ø0.290
(TYP 4
PLACES)

1.375

5.273

3.714

0.500

0.000

0.750

0.000

8.581

8.206

7.706

4.214
R0.25 (TYP)

3.339

R0.38
(TYP)



GRAIN
DIRECTION

R2.75
(TYP)

D3243-1
FLAT PATTERN

R0.50
(TYP)

**D3243-041 BRACKET ASSEMBLY
(D3243-1 BRACKET)**

- 1) MATERIAL: 6061-T6, 0.063 THICK
(QQ-A-250/11, REF DART SPEC
M6061T6S.063)
- 2) FINISH: CHEMICAL CONVERSION COAT
PER DART QSI 005 4.1
POWDER COAT BLACK (4.3.5.7) PER
DART QSI 005 4.3
- 3) BREAK ALL SHARP EDGES 0.005 TO
0.010
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) TOLERANCES ARE PER DART QSI 018
UNLESS OTHERWISE NOTED

RELEASED
04.02.03

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2. GENERAL NOTES

COMPATIBILITY

Compatibility of this installation with the aircraft is the **responsibility of the installer**. Ensure that this installation does not conflict with a previous modification.

CONTINUING AIRWORTHINESS

This installation should be maintained in accordance with the Instructions for Continued Airworthiness ICA-D044-715.

3. INSTALLATION INSTRUCTIONS

To install the Dart Cargo Mirror Installation on the R44 skidtube:

1. Locate the D3243-041 Bracket with approximately 0.38" (10mm) space between the top of the skidtube and the bracket, as shown in Figure 2. Transfer drill the 4 holes from the bracket to the centerline of skidtube and enlarge to 10/64" (Ø0.297"). Deburr holes and wet install ALS7-1032-130 inserts using MIL-P-85582 or MIL-P-23377 primer.
2. Install the D3243-041 Bracket on the skidtube using the AN3 hardware. The bolts should be sealed with Sikaflex-241/-291 or Proseal 890 or MIL-S-8802 Class 'B2' sealant before installing as per Figure 2.
3. Install remaining hardware per Figure 2 as required. Adjust the angle of the D2010-104 Arm and tighten the AN526C1032R10 screws to secure arm.
4. To adjust the mirror: loosen (DO NOT REMOVE) the three adjustment screws shown in Figure 2, reposition the mirror, then tighten the screws.

4. WEIGHT AND BALANCE

Installation	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D044-715-011 Cargo Mirror Installation	1.3 lb 0.59 kg	41.7 in 1.06 m	54.2 lb-kG 0.63 m-kG	32.0 in 0.81 m	41.6 in-lb 0.48 m-kG

5. PARTS LIST

Qty	Part Number	Description
X	D044-715-011	CARGO MIRROR INSTALLATION
2	D1048	Clamp
2	D1049	Saddle
1	D2010-104	Arm
1	D2011-101	Mirror
1	*D3014-1	Locknut
1	D3243-041	Bracket
4	ALS7-1032-130	Insert (or AKS7-1032-130, AKS4-1032-130, ALS4-1032-130)
4	AN3-4A	Bolt
4	AN526C1032R10	Screw (or AN526-1032R10)
4	AN960JD10L	Washers
1	*AN960JD416L	Washer

* PARTS ARE INCLUDED WITH D2011-101 MIRROR

REFERENCE ONLY

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Revision: **A**

Date: 04.01.20